CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2004
International Mechanical Code	2006	Uniform Code for	
International Plumbing Code	2006	Building Conservation	
International Fire Code	2006	ADA Accessibility	
International Energy Conservation Code	2006	Guildelines	

A. Occupancy and Group: _____ EXISTING MECHANICAL ROOM _____

Change in Use: Yes _____ No __X__ Mixed Occupancy: Yes _____ No _____

Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: _____ Design Wind Speed: _____ mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A V/B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: _____ South: _____ East: _____ West: _____

E. Mixed Occupancies: _____ Nonseparated Uses: _____

F: Sprinklers:

Required: _____ Provided: _____ Type of Sprinkler System: _____

G: Number of Stories: _____ Building Height: _____

H: Actual Area per Floor (square feet): _____

I: Tabular Area: _____

J: Area Modifications:

a) $A_a = A_t + \left[\frac{A_t \, I_f}{100}\right] + \left[\frac{A_t \, I_s}{100}\right]$ $\qquad I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$$

c) Total Allowable Area for:

1) One Story: _____
2) Two Story: $A_a(2)$_____
3) Three Story: $A_a(3)$_____

d) Unlimited Area Building: Yes _____ No _____ Code Section: _____

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load: _____

Exit Width Required: _____ Exit Width Provided: _____

M. Minimum Number of Required Plumbing Facilities:

a) Water Closets - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
b) Lavatories - Required (m) _____ (f) _____ Provided (m) _____ (f) _____
c) Bath Tubs or Showers: _____
d) Drinking Fountains: _____ Service Sinks: _____

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:

a) High Rise Requirements.
b) Atriums.
c) Performance Based Criteria.
d) Means or Egress Analysis.
e) Fire Assembly Locator Sheet.
f) Exterior and Interior Accessibility Route.
g) Fire Stopping, Including Tested Design Number.

DRAPER NATIONAL GUARD HQ
CHILLER REPLACEMENT

DFCM PROJECT #07294480

State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

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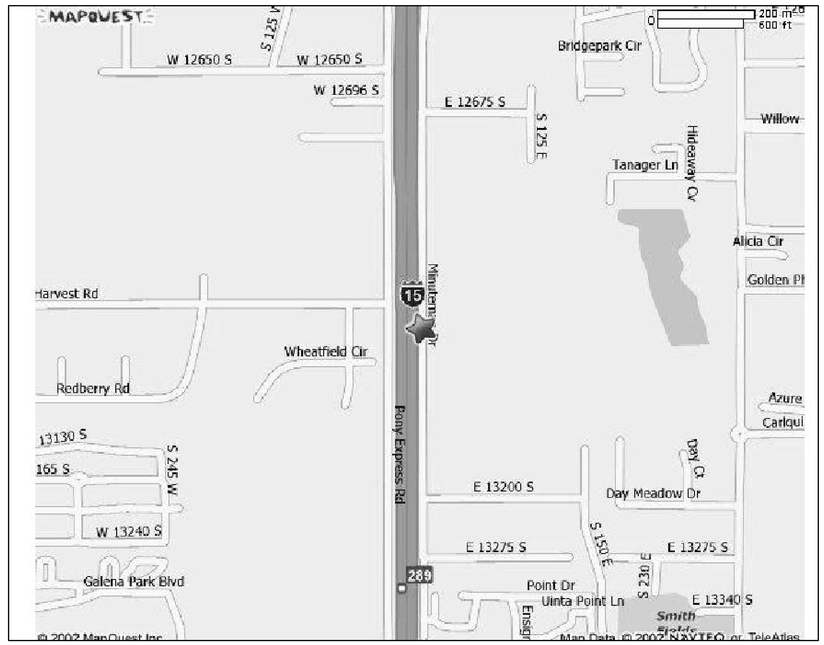

MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY		
A / ME-101		SECTION LETTER DESIGNATION SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION CORRESPONDING WITH GRID LOCATION
AH / 1		MECHANICAL EQUIPMENT DESIGNATION EQUIPMENT ITEM DESIGNATION
D-1 / CFM		REGISTER, GRILL OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRE
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
AP		ACCESS PANEL
℄ EL.		CENTER LINE ELEVATION
INV. ELEV.		INVERT ELEVATION
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
CC		CONTROL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
FPC		FIRE PROTECTION CONTROL
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE
C		COMMON
NC		NORMALLY CLOSED
NO		NORMALLY OPEN

SYMBOL	ABR.	DESCRIPTION
WET SIDE		
		PUMP
	PSD	PUMP SUCTION DIFFUSER
		UNION
		MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)
		MANUAL ACTUATOR (GATE, GLOBE, S&D, OS&Y, ETC. VALVES)
		PNEUMATIC DIAPHRAGM ACTUATOR
M		ELECTRIC MOTOR ACTUATOR
S		SOLENOID ACTUATOR
		THREADED OR SWEAT VALVE CONNECTION
		FLANGED VALVE CONNECTION
		BUTTERFLY VALVE
		GATE VALVE
		GLOBE VALVE - STRAIGHT PATTERN
		GLOBE VALVE - ANGLE PATTERN
M		MOTORIZED 2-WAY CONTROL VALVE
M		MOTORIZED 3-WAY CONTROL VALVE
		CHECK VALVE
	PRV	PRESSURE REDUCING VALVE
	PRV	PRESSURE REDUCING VALVE W/ CHECK
	CBV	CIRCUIT BALANCING VALVE
	BV	BALL VALVE
P	PRV	PRESSURE RELIEF VALVE
T	TRV	THERMAL RELIEF VALVE
S	SRV	SAFETY RELIEF VALE
		PLUG VALVE
		NEEDLE VALVE
	TDV	TRIPLE DUTY VALVE
	TDV	TRIPLE DUTY VALVE - ANGLE
	TDV	TRIPLE DUTY VALVE - STRAIGHT
		AUTOMATIC AIR VENT
		MANUAL AIR VENT
		STRAINER
		STRAINER W/ PLUGGED BLOW OFF
	VTI	VENTURI
		PRESSURE GAUGE AND GAUGE COCK - WATER
		PRESSURE GAUGE AND GAUGE COCK - STEAM
		THERMOMETER AND THERMOWELL
S		WATER TEMPERATURE SENSOR AND THERMOWELL
F		FLOW SWITCH
PS	PS	PRESSURE SWITCH
	TW	THERMOWELL
		DIRECTION OF FLOW

SYMBOL	ABR.	DESCRIPTION
WET SIDE CONT		
		PITCH DOWN
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		EXISTING PIPING TO BE REMOVED
		EXISTING PIPING TO REMAIN
		NEW PIPING
		PIPE CAP OR PLUG
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		ANCHOR POINT
CD		CONDENSATE DRAIN
G		NATURAL GAS PIPING
CF		CHEMICAL FEED LINE
MU		MAKE-UP WATER LINE
	CW	CULINARY COLD WATER
	HW	CULINARY HOT WATER
		RECIRCULATED CULINARY HOT WATER
DR		EQUIPMENT DRAIN
HWS		HEATING WATER SUPPLY
HWR		HEATING WATER RETURN
CHWS		CHILLED WATER SUPPLY
CHWR		CHILLED WATER RETURN
CS		CONDENSER SUPPLY
CR		CONDENSER RETURN

GENERAL NOTES:

G-1 MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO CHANGES FOR APPROVAL. CONTRACTOR SHALL NOT START ANY CHANGES UNTIL NOTIFIED IN WRITING. IF CHANGES ARE MADE PRIOR TO APPROVAL CONTRACTOR SHALL TAKE ALL RESPONSIBILITY FOR THE CHANGES MADE AND ALL COSTS RELATING TO FAILURE OR REPLACEMENT OF ALTERATIONS.

G-3 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS. THE CONTRACTOR SHALL PROVIDE OR COORDINATE WITH THE GENERAL CONTRACTOR PROVISIONS FOR BLOCKOUTS OR CORE DRILLS THROUGH STRUCTURE.

G-5 THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

G-6 THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-7 THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS.

G-8 SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-9 CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-10 ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2006 EDITION OF THE IMC WITH UTAH ANNOTATIONS AND LOCAL AUTHORITY REQUIREMENTS.

G-11 THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE DRAINING DOWN AND RE-FILLING OF ALL SYSTEMS NECESSARY TO COMPLETE THE WORK OUTLINED BY THIS PROJECT. THIS INCLUDES PROVIDING THE REQUIRED CHEMICAL TREATMENT WHEN RE-FILLING THE SYSTEM.

G-12 ALL PIPING, MATERIALS, ETC. SHALL BE NEW AND DOMESTIC MADE UNLESS SPECIFICALLY AUTHORIZED IN WRITING PRIOR TO BID.

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PROJECT NAME & ADDRESS

DRAPER NATIONAL GUARD HQ CHILLER REPLACMENT
DFCM #07294480

12953 S. Minuteman Dr.
Draper, Utah 84020

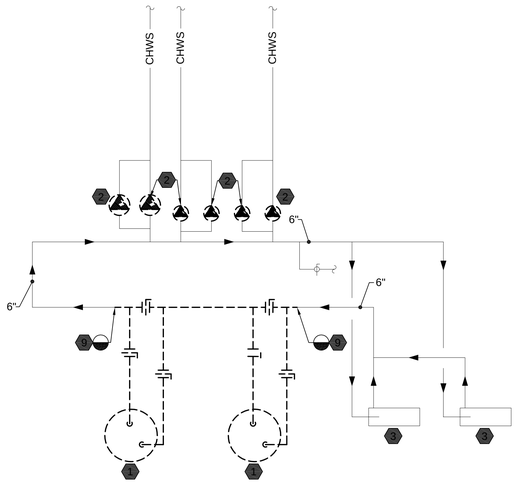
MARK	DATE	REVISION

PROJECT MANAGER: WMP
DRAWN BY: STAFF
CHECKED BY: WMP
DATE: 04/17/08
WHW JOB NO.: 07051

PROFESSIONAL ENGINEER 04/17/08 WINWARD M. PACKER No. 375080 STATE OF UTAH

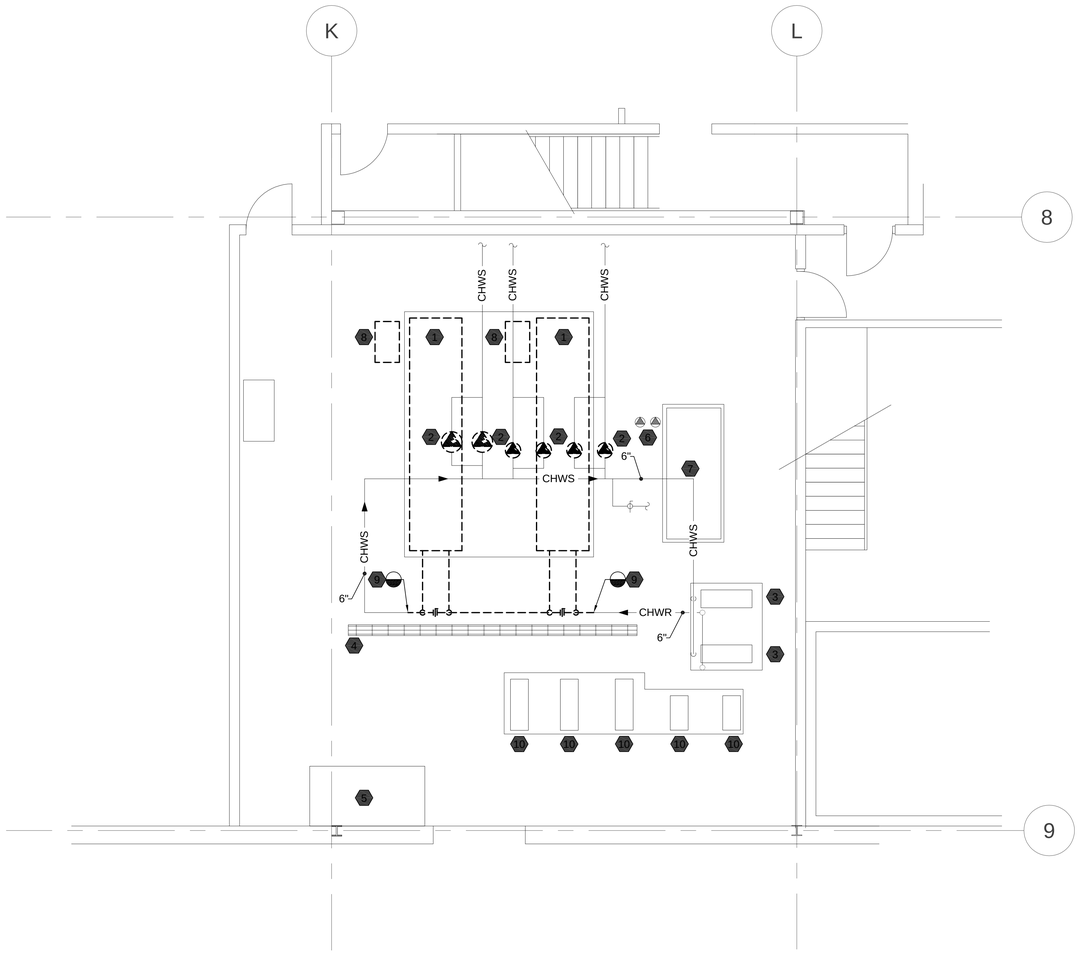
SHEET TITLE
GENERAL MECHANICAL NOTES AND LEGEND

SHEET NO.
MG001



B1 EXISTING CHILLED WATER FLOW SHEET

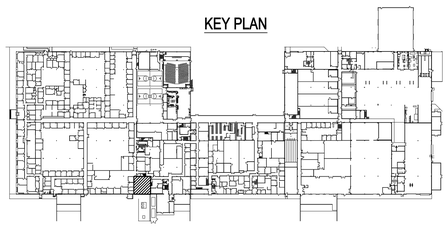
SCALE: NONE



A1 MAIN FLOOR LARGE SCALE MECHANICAL DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

KEY PLAN



SHEET NOTES

SHEET NOTES:

1. REMOVE EXISTING CHILLER AND ASSOCIATED ELECTRICAL, CONTROLS, PIPING CONNECTIONS,ETC.
2. ADDITIVE ALTERNATE #1: REMOVE EXISTING IN-LINE CHILLED WATER PUMPS.
3. EXISTING BASE MOUNTED PUMPS SHALL REMAIN.
4. EXISTING TRENCH DRAIN SHALL REMAIN.
5. EXISTING DISTRIBUTION PANELS SHALL REMAIN.
6. EXISTING IN-LINE PUMPS SHALL REMAIN.
7. EXISTING SMALL CHILLER SHALL REMAIN.
8. REMOVE EXISTING ELECTRICAL PANELS ASSOCIATED WITH CHILLERS
9. REMOVE EXISTING SECTION OF CHILLED WATER PIPING AS SHOWN.
10. EXISTING BASE MOUNTED CONDENSER WATER PUMPS, AND ASSOCIATED CONDENSER WATER PIPING SHALL REMAIN.

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING CONDITIONS BEFORE PROCEDING WITH ANY DEMOLITION, FABRICATION, ETC.
2. THIS CONTRACTOR SHALL HIRE A LICENSED DESIGN BUILD ELECTRICIAN TO DISCONNECT EXISTING EQUIPMENT, AND RE-CONNECT, NEW EQUIPMENT TO EXISTING POWER.

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CHECKED BY: WMP
DATE: 04/17/08
WHW JOB NO.: 07051

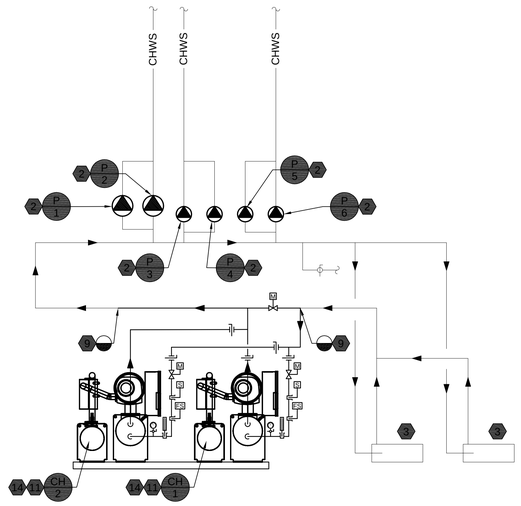
PROFESSIONAL ENGINEER 04/17/08 WINWARD M. PACKER No. 375080 STATE OF UTAH

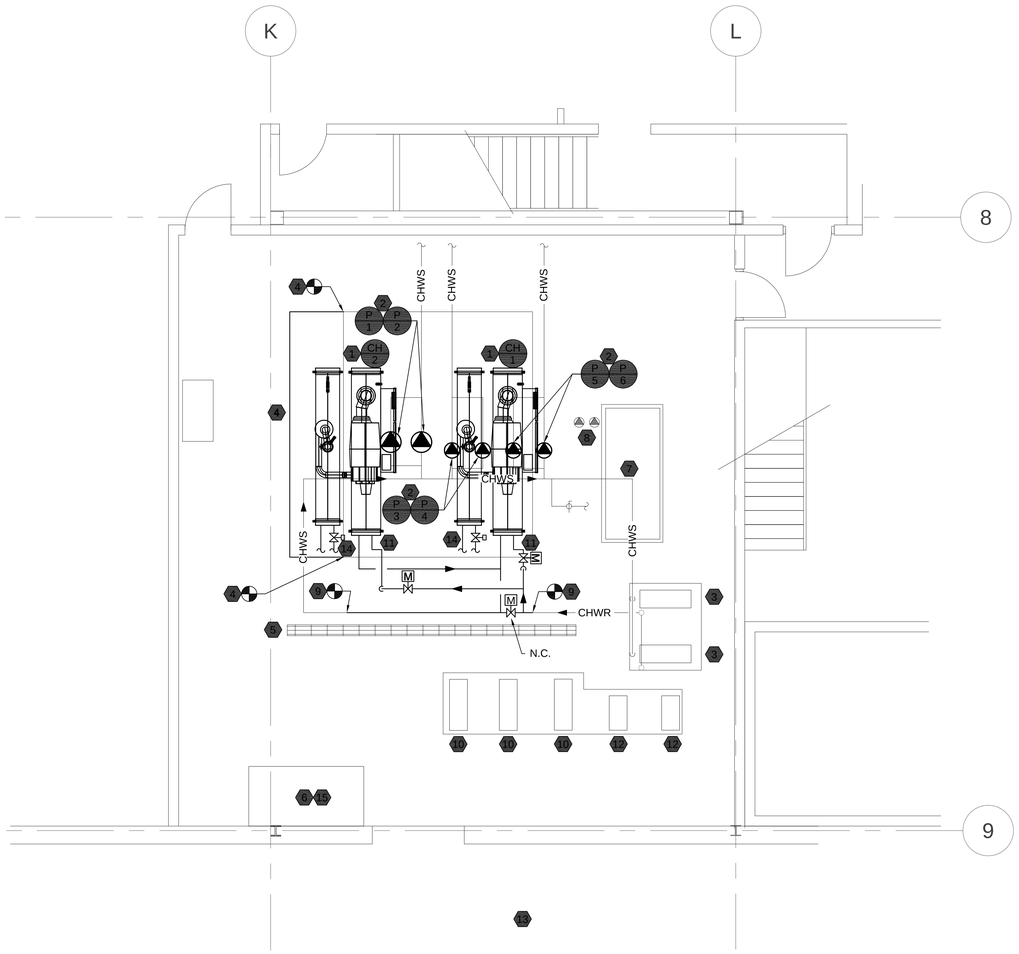
SHEET TITLE

MAIN FLOOR LARGE SCALE MECHANICAL DEMOLITION PLAN

SHEET NO.

MD401





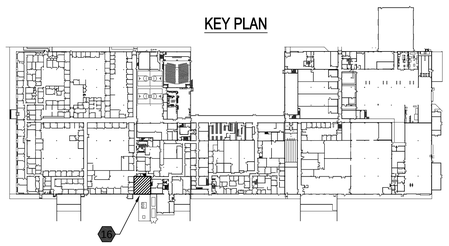
B1 NEW CHILLED WATER FLOW SHEET

SCALE: NONE

MAIN FLOOR LARGE SCALE MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

KEY PLAN



SHEET NOTES

SHEET NOTES:

1. PROVIDE NEW CHILLER AND CHILLED WATER PIPING. RE-CONNECT TO EXISTING CONDENSER PIPING, AND CONTROLS. MOUNT ON EXISTING CONCRETE HOUSEKEEPING PAD. PROVIDE SAFETY RELIEF VENT PIPING TO EXTERIORS.
2. ADDITIVE ALTERNATE #1: PROVIDE NEW IN-LINE PUMPS. RE-CONNECT TO EXISTING PIPING, ELECTRICAL, AND CONTROLS. MODIFY AS NECESSARY.
3. EXISTING BASE MOUNTED CHILLED WATER PUMPS SHALL REMAIN. PROVIDE NEW 15 HP VFD FOR EACH PUMP.
4. PROVIDE NEW HOUSE KEEPING PAD. EXTEND 3'-6", AND DOWN INTO EXISTING PAD.
5. EXISTING TRENCH DRAIN SHALL REMAIN.
6. EXISTING DISTRIBUTION PANEL SHALL REMAIN.
7. EXISTING SMALL CHILLER SHALL REMAIN.
8. EXISTING IN-LINE PUMPS SHALL REMAIN.
9. PROVIDE NEW CHILLED WATER PIPING AS SHOWN.
10. PROVIDE NEW VFDS FOR EXISTING 25 HP CONDENSER WATER PUMPS. ASSOCIATED CONDENSER WATER PIPING SHALL REMAIN.
11. PROVIDE NEW CHILLED WATER PIPING CONNECTIONS TO NEW CHILLERS. SEE DETAIL. INSTALL CHILLERS IN SEQUENCE SO THAT AT LEAST 1 REMAINS OPERATIONAL AT ALL TIMES.
12. EXISTING SMALL CONDENSER PUMPS TO EXISTING SMALL CHILLER SHALL REMAIN.
13. EXISTING COOLING TOWER AND ASSOCIATED PIPING, ELECTRICAL, ETC. SHALL REMAIN. COORDINATE WITH ATC TO PROGRAM 4 STAGES OF TOWER. (2 CELLS, 2 FAN SPEEDS PER CELL)
14. PROVIDE CONDENSER PIPING MODIFICATIONS AS NECESSARY TO CONNECT TO NEW CHILLERS. PROVIDE 2-WAY MODULATING CONTROL VALVE IN CONDENSER SUPPLY TO CHILLER. SEE DETAIL.
15. THIS CONTRACTOR SHALL HIDE A DESIGN BUILD ELECTRICIAN TO PROVIDE ELECTRICAL CONNECTIONS FOR NEW CHILLERS. PROVIDE NEW WIRING AND BREAKERS. MODIFY EXISTING CONDUIT AS NECESSARY.
16. CHILLER ROOM LOCATION.

GENERAL NOTES:

1. FIELD VERIFY ALL EXISTING CONDITIONS BEFORE PROCEEDING WITH ANY DEMOLITION, FABRICATION, ETC.
2. THIS CONTRACTOR SHALL HIRE A LICENSED ELECTRICIAN TO DISCONNECT EXISTING EQUIPMENT, AND RE-CONNECT, NEW EQUIPMENT TO EXISTING POWER. RE-PLACE BREAKERS, DISCONNECTS, ETC.

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PROFESSIONAL ENGINEER 04/17/08 WINWARD M. PACKER No. 375080 STATE OF UTAH

SHEET TITLE

MAIN FLOOR LARGE SCALE MECHANICAL PLAN

SHEET NO.

ME401

CHILLER SCHEDULE

SYMBOL	CAPACITY TONS	COOLER DATA					CONDENSER DATA					ELECTRICAL										COMMENTS	MANUFACTURER AND MODEL
		GPM	MAX PRESS. DROP FT	WATER IN TEMP. °F	WATER OUT TEMP. °F	NO. OF PASSES	GPM	MAX PRESS. DROP FT	WATER IN TEMP. °F	WATER OUT TEMP. °F	NO. OF PASSES	INPUT KW	VOLT	Ø	Hz	RLA	LRA	INRUSH AMPS	MCA	MOCP	SOUND PRESSURE (dBA)		
CH 1	224	534	5	55	45	2	614	18.1	85	75	2	110.2	460	3	60	156	1280	400	194.3	300	83	1,2,3,4,5	TRANE RTHD
CH 2	224	534	5	55	45	2	614	18.1	85	75	2	110.2	460	3	60	156	1280	400	194.3	300	83	1,2,3,4,5	TRANE RTHD

1. MAXIMUM NPLV SHALL BE 0.477 KW/TON (7.37 COP). MINIMUM PEAK EFFICIENCY SHALL BE 0.493 KW/TON (7.13 COP).
2. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
3. PROVIDE SOUND REDUCTION ENCLOSURE/WRAP FOR ENTIRE CHILLER. SOUND REDUCTION SHALL REDUCE SOUND PRESSURE BY A MINIMUM 11 dBA.

ADDITIVE ALTERNATE #1

4. PROVIDE MINIMUM 3 DAY FACTORY TRAINING FOR 1 MEMBER OF OWNER'S MAINTENANCE TEAM.

ADDITIVE ALTERNATE #2

5. COORDINATE OVERALL DIMENSIONS WITH PLAN VIEW. VERIFY THAT UNIT WILL FIT WITH PROPER CLEARANCES AS SHOWN.

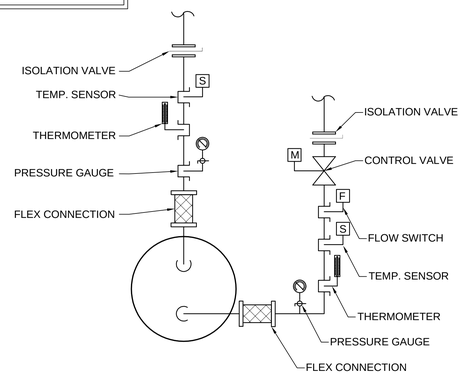
PUMP SCHEDULE

SYMBOL	TYPE	MAKE / MODEL	GPM	FT. HEAD	SUCTION SIZE	DISCHARGE SIZE	IMPELLER SIZE	MOTOR			WEIGHT LBS	SERVICE	SCHEDULE NOTES
								V - Ø - Hz	HP	RPM			
P 1	IN-LINE	BELL & GOSSETT SERIES 80	500	90	4	4	10.625	460/3/60	20	1750	585	CHILLED WATER	1,2,3
P 2	IN-LINE	BELL & GOSSETT SERIES 80	500	90	4	4	10.625	460/3/60	20	1750	585	CHILLED WATER	1,2,3
P 3	IN-LINE	BELL & GOSSETT SERIES 80	95	95	2	2	9.5	460/3/60	7.5	1750	250	CHILLED WATER	1,2,3
P 4	IN-LINE	BELL & GOSSETT SERIES 80	95	95	2	2	9.5	460/3/60	7.5	1750	250	CHILLED WATER	1,2,3
P 5	IN-LINE	BELL & GOSSETT SERIES 80	95	95	2	2	9.5	460/3/60	7.5	1750	250	CHILLED WATER	1,2,3
P 6	IN-LINE	BELL & GOSSETT SERIES 80	95	95	2	2	9.5	460/3/60	7.5	1750	250	CHILLED WATER	1,2,3

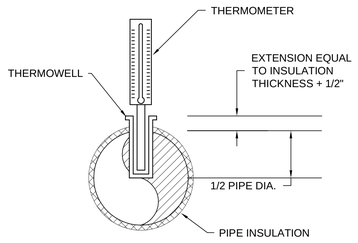
1. PROVIDE REMOVABLE INSULATION KIT AROUND PUMP SUCTION.
2. ALL PUMPS SHALL BE SIZED IN THE MIDDLE PART OF THE CURVE. SEE DETAIL.
3. SEE SPECIFICATIONS FOR OTHER APPROVED MANUFACTURERS.

NOTE:

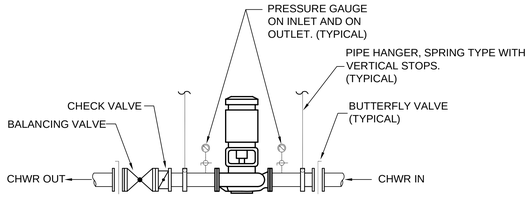
PROVIDE NEW CHILLED WATER AND CONDENSER WATER CONNECTIONS PER DETAIL.



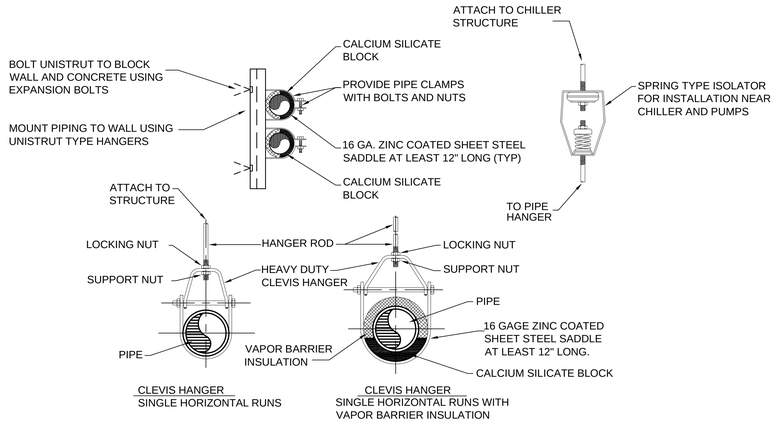
A2 CHILLER CONNECTION DETAIL
SCALE: NONE



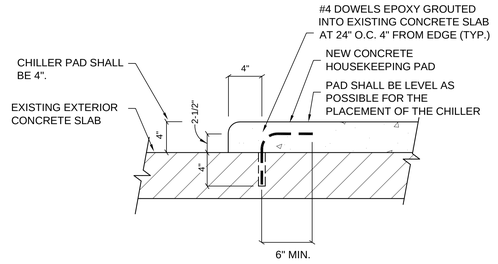
B3 THERMOWELL DETAIL
SCALE: NONE



A3 IN-LINE PUMP DETAIL
SCALE: NONE



B5 PIPE HANGER DETAIL
SCALE: NONE



A5 HOUSEKEEPING PAD DETAIL
SCALE: NONE

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PROJECT NAME & ADDRESS

DRAPER NATIONAL GUARD HQ CHILLER REPLACMENT
DFCM #07294480

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Draper, Utah 84020

MARK	DATE	REVISION

PROJECT MANAGER: WMP
DRAWN BY: STAFF
CHECKED BY: WMP
DATE: 04/17/08
WHW JOB NO.: 07051

PROFESSIONAL ENGINEER 04/17/08 WINWARD M. PACKER No. 375080 STATE OF UTAH

SHEET TITLE
MECHANICAL DETAILS AND SCHEDULES

SHEET NO.
ME601